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Country Analysis Briefs

May 2002

Philippines

The Philippines is important to world energy markets because it is a growing consumer of energy, particularly electric power, and a major potential market for foreign energy firms. It also may become a major producer of natural gas.

Note: information contained in this report is the best available as of May 2002 and can change.

BACKGROUND

The new millennium has brought about important changes to the island nation of the Philippines. With the installation of former Vice-President Gloria Macapagal-Arroyo on January 20, 2001, the Philippines has undertaken an economic transformation, deregulating its energy sector and offering new incentives for foreign investment. President Macapagal-Arroyo, a trained economist, came into power when former President Joseph Estrada was forced from office. Under Macapagal-Arroyo, key economic indicators, including GDP growth rate, foreign investment, and inflation have trended favorably. But while a certain degree of success has been achieved, the country's fiscal deficit, declining currency, and regional inequality are still problematic. A major natural gas discovery in the Malampaya field, officially

inaugurated in October of 2001, coupled with increasing military support from the United States could prove to have a significant impact on the country's future.

Real gross domestic product (GDP) grew by 3.4% in 2001. This increase exceeded both Philippine and international expectations. Much of the country's renewed economic vibrancy results from improved agricultural yields, as well as from an increase in domestic consumption brought about by curbed inflation. Growing confidence in the Macapagal-Arroyo administration, as well as the excitement surrounding the sizable Malampaya natural gas field also have had a positive effect. Foreign investment shot up 171%, to $3.4 billion in 2001, as investors gained confidence in Manila's political climate as well as a newly deregulated and privatized energy sector.

American troops have been invited into the Philippines to work with local armed forces on the Southern island of Basilan. Basilan is home to the Abu Sayyaf, an insurgent and violent Philippine rebel group. As of April, 2002, approximately 1,200 American soldiers were stationed in the Philippines.

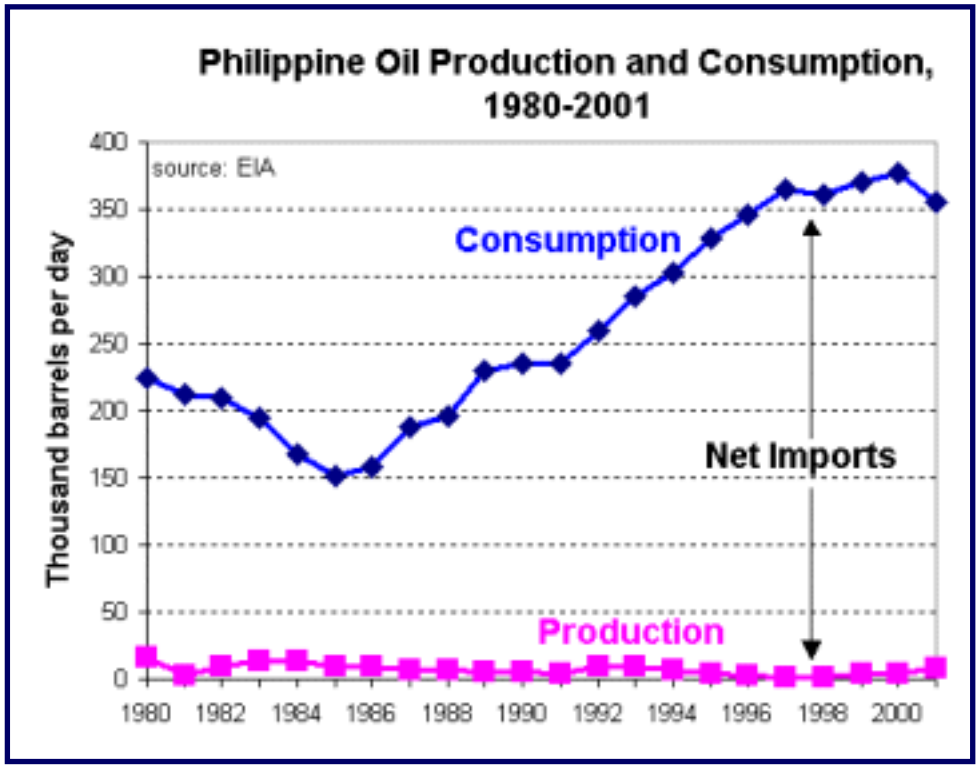
The Philippines is one of the claimants, along with China, Brunei, Malaysia, and Vietnam, to the Spratly Islands, located in the South China Sea. Potential oil and natural gas reserves surrounding the islands have sparked the interest of all the littoral states.

ENERGY

The Philippines' energy sector is relatively dynamic. Major reforms are underway, as are projects to electrify isolated villages, to reduce the Philippines' dependence on imported oil, and to change the relative composition of fuel consumption. The government has created the Philippine Energy Plan (PEP) 2000-2009 with the following major goals: 1) to increase domestic petroleum production to become at least 50% energy self-sufficient by 2004; 2) to accelerate completion of the "O Ilaw" rural electrification program, which stipulates 100% electrification by 2004; 3) to implement

structural reforms to increase private-sector investment so as to meet projected energy requirements in electricity; 4) to create a policy framework for the natural gas industry; and 5) to continue to deregulate the downstream oil sector.

OIL



The Philippines began 2001 producing an average of only 1,000 barrels per day (bbl/d) of oil. Production jumped to 20,000 bbl/d by October, and reached 22,000 bbl/d by year's end. This dramatic increase was due primarily to the discovery of new deep-sea oil deposits beneath the natural gas-bearing structures in the Malampaya field. But while new hydrocarbon discoveries will significantly reduce the Philippines' oil import bill, the country is still a highly dependent net oil importer. The Philippines consumed 356,000 bbl/d on average in 2001 and produced 8,460 bbl/d, resulting in net oil imports of 347,540 bbl/d.

This dependence on imported oil makes the Philippine economy vulnerable to sudden spikes in world oil prices. For example, the Philippine oil import bill increased over 70% during the first eight months of 2000. The Philippine Institute of Petroleum estimates that local oil companies lost between 3.5-4.0 billion pesos in 2000 due to their inability to adjust petroleum prices to fully reflect the increased cost of imported oil and foreign exchange depreciation. Oil consumption is expected to increase by 5.9% annually over the next several years as economic growth increases demand in most sectors. Oil demand for power generation, however, is expected to decline by over 50%

by 2011, as the government retires aging oil-fired electric power plants and switches to natural gas and alternative power sources.

Despite small proven oil reserves, the Philippines has enjoyed a recent wave of optimism amongst domestic and foreign drillers. In October of 2001, exploration underneath the Malampaya gas field revealed an estimated 85 million barrels of oil condensate. Shell Philippines Exploration (SPEX) has committed $4.5 billion to the combined oil/natural gas project, and anticipates potential crude oil production of 35,000-50,000 bbl/d by 2003. In addition, six new offshore explorations have commenced in the Malampaya basin, led by Nido Petroleum, Philippines National Oil Company Exploration Corp., Trans-Asia Oil, Unocal Corp., and Philodril. Also, Trans-Asia has conducted exploratory drilling at the San Isidro well in the East Visayan Basin. This area may contain as much as 60 million barrels of oil according to some estimates. The Philippine government estimates reserves of up to 246 million barrels in northwestern Palawan, and 37.4 million barrels in the Minduro-Cuyo basin. The Philippines National Oil Company also expects to begin drilling in Lagao, Lambayong province in July of 2002, seeking an estimated 561 million barrels of oil.

Refining & Downstream

The Philippines' downstream oil industry is dominated by three companies: Petron, Pilipinas Shell (Royal Dutch/Shell's Philippine subsidiary), and Caltex (Philippines). Petron is the Philippines' largest oil refining and marketing company. The company was a wholly owned subsidiary of the state-owned Philippine National Oil Company (PNOC) until 1994. Currently, the Philippine government and Saudi Aramco each own 40% of the company, with the remaining 20% held by portfolio and institutional investors, making it the only publicly listed firm amongst the three oil majors. Petron's Limay, Bataan refinery has a crude processing capacity of 180,000 bbl/d. Petron's market share at the start of 2002 was 38.3%, a 3.4% gain over 2001. Caltex (Philippines), a subsidiary of Caltex, the Texaco-Chevron joint venture based in Singapore, operates a 86,500-bbl/d refinery, two terminals, and more than 1,000 gasoline stations throughout the Philippines. Its market share is 23.8%,

a 2.2% gain over 2001. Pilipinas Shell has a 153,000-bbl/d refinery, one of the largest foreign investments in the Philippines, and operates some 1,000 Shell gas stations. Shell's market share is 38%, a 4.7% gain over 2001. Overall, Philippine refineries run at around 80% of capacity, and there is not a great deal of demand for new refinery construction.

Oil market deregulation, beginning in 1998, continues to have a significant effect on the industry. Since deregulation started, 62 new firms, including TotalfinaElf, Flying V, SeaOil (Philippines), Eastern Petroleum, Trans-Asia Energy and Unioil Petroleum Philippines Inc., have invested $13 billion and built approximately 312 new retail stations. By the end of 2000, the new players had amassed 10.4% of the local oil market. These new entrants have organized the "New Players Petroleum Association of the Philippines" (NPPAP), and have been credited with putting significant downward pressure on retail fuel prices in the country. Currently, the Philippines enjoys the lowest fuel prices of any non oil-exporting Asian country. However, price swings associated with deregulation and higher world oil prices have angered many impoverished Filipinos. Despite public calls for explicit price controls, the government has remained committed to deregulation . In December 1999, the Supreme Court upheld the constitutionality of the country's deregulation program. The NPPAP has shown some opposition to the program, claiming its provisions are insufficient as new players have not been able to capture at least 30% of the market.

Major downstream developments on the horizon include a $600 million naptha cracker plant to be built by the Philippine National Oil Company in conjunction with Brunei's Mashor Group and Malaysia's Petron. The plant, which most likely will be supplied with natural gas from the Indonesian Dongi field, would enable the Philippines to become an independent producer of advanced petrochemical products and plastics. The government has also called for a new LNG receiving terminal to be built in Bataan to receive imported natural gas.

In January 2000, the Philippines' Department of Energy announced plans to

accelerate the phase out of leaded gasoline. Leaded gasoline is banned already in Manila.

NATURAL GAS

The Philippines has 3.693 trillion cubic feet (Tcf) of proven natural gas reserves, but no significant production at the present. While in the past the gas sector has not been developed extensively, the government has made expanding gas use a priority, particularly for electric power generation, in an effort to cut oil import expenses. The government expects total domestic natural gas production to increase annually by 146.4 billion cubic feet (Bcf) to reach 1.5 Tcf by 2011.

The impetus for the dramatic change in the country's natural gas sector is the Malampaya offshore field. Malampaya is the largest natural gas development project in Philippine history, and one of the largest-ever foreign investments in the country. Shell Philippines Exploration (SPEX, operator, with a 45% stake), Texaco (45%), and the PNOC (10%) have come together to form the Malampaya Deepwater Gas-to-Power Project. The Malampaya field is located in the South China Sea, off the northern island of Palawan, and contains an estimated 2.6 Tcf of natural gas. A 312-mile (504-kilometer) pipeline links the field to three power plants in Batangas. The pipeline is among the longest deep-water pipelines in the world, with half of its length more than 600 feet deep. With completion of the sub-sea pipeline and conversion of the first of three power stations, (San Rita, operated by British Gas and Philippines 1st Gas Corp.), the Malampaya project was officially inaugurated on October 16, 2001. Gas from Malampaya eventually will fire three power plants with a combined 2,700-megawatt (MW) capacity for the next twenty years and will displace 26 million barrels of fuel oil, according to the government. The BG/Philippines 1st Gas Corp. partnership has announced that it expects to have a second station, the San Lorenzo facility, converted for natural gas use by 2003. The government has publicly considered selling a 10% share in the Malampaya project to the public; however no date has yet been set for the IPO.

An $80 million joint venture between PNOC, RoyalDutchShell and Brunei's Mashor Group, to expand the pipeline from Batangas to Metro Manila is being planned. This pipeline would supply gas to additional power plants as well as the industrial and commercial sectors. PNOC has also commenced plans with Malaysian Petronas to build a 620-mile (1000-kilometer) line between the two countries, completing one of the five components in the developing ASEAN power grid.

A number of foreign and domestic firms also are looking at onshore and offshore exploration projects in the Philippines. A consortium of five companies (PNOC as operator holding 78.75%, and four Australian companies) is exploring natural gas fields on and around Fuga Island under Geophysical Survey and Exploration Contract 84. This area has been estimated to contain up to 5 Tcf of natural gas, but this is still unconfirmed. The Fuga 1 exploration well was plugged and abandoned in June 2000 after producing no hydrocarbons. This area, to the north of Luzon, is still being considered, however, for a pipeline to Taiwan if a large enough gas find comes into production. Also, exploration is soon to begin in Southern Cebu by two undisclosed American firms, as well as in the Sultan Kodurat province by undisclosed European and Middle Eastern firms. Three natural gas fields were closed down in 2001. Fields in the Tukankuden and the Cotabato Basin were shut down due to the proximity of rebel soldiers, while another field in Victoria, Tarlac, was closed because the gas discovered was too saturated with water for commercial production.

The Philippine government is developing a policy framework for the emerging gas industry that foresees the government's role as that of facilitator while attempting to ensure competition. Domestic development is to be encouraged, but competition from imported gas also is to be allowed. Gas supply to wholesale markets will have market-set prices, while prices for captive markets and small consumers will be regulated.

COAL

Development of new natural gas projects in the Philippines has come largely

at the expense of the country's struggling coal industry. Despite producing 1.49 million short tons in 2000, PNOC announced that it plans to close its national coal subsidiary. The government also announced that many of the country's coal-fed power plants are being considered for conversion to natural gas, including the 600-MW Calaca plant south of Manila. Napocor, the National Power Company, has followed suit, ordering its coal-fired plants to operate at diminished capacity in order to allow more capacity for natural gas-fired plants. The country has decided to restructure the use of its 366 million short tons of estimated coal reserves, which is mostly low-rank lignite, for processing in smaller "clean coal" plants, for eventual end-use as household fuel, and briqueting. In the Department of Energy's 2002-2009 energy plan, three new smaller-scale plants are planned, including a $62 million 50-MW minemouth power plant in Isabella, which should be completed by 2005.

The Philippines consumed 9.5 million short tons of coal in 2000, eight million short tons of which were imported. Indonesia and China are major exporters of coal to the Philippines, and both have been in negotiations with Manila about increasing their quotas. There has been very little new exploration for coal in the Philippines since a methane explosion in 1997 killed many workers and caused public hostility to the industry. New plants have faced increasing opposition from both agricultural and church groups.

World Trade Organization (WTO) regulations require that the Philippines lift import restrictions on coal. Since the 1970s, when the National Coal Authority was created, Philippine coal importers have been required to obtain a government certificate of compliance before importing coal, allowing the authorities to force importers to buy domestic coal each time they purchased coal from abroad. President Macapagal Arroyo has committed to honoring the international coal supply contracts approved by the previous government.

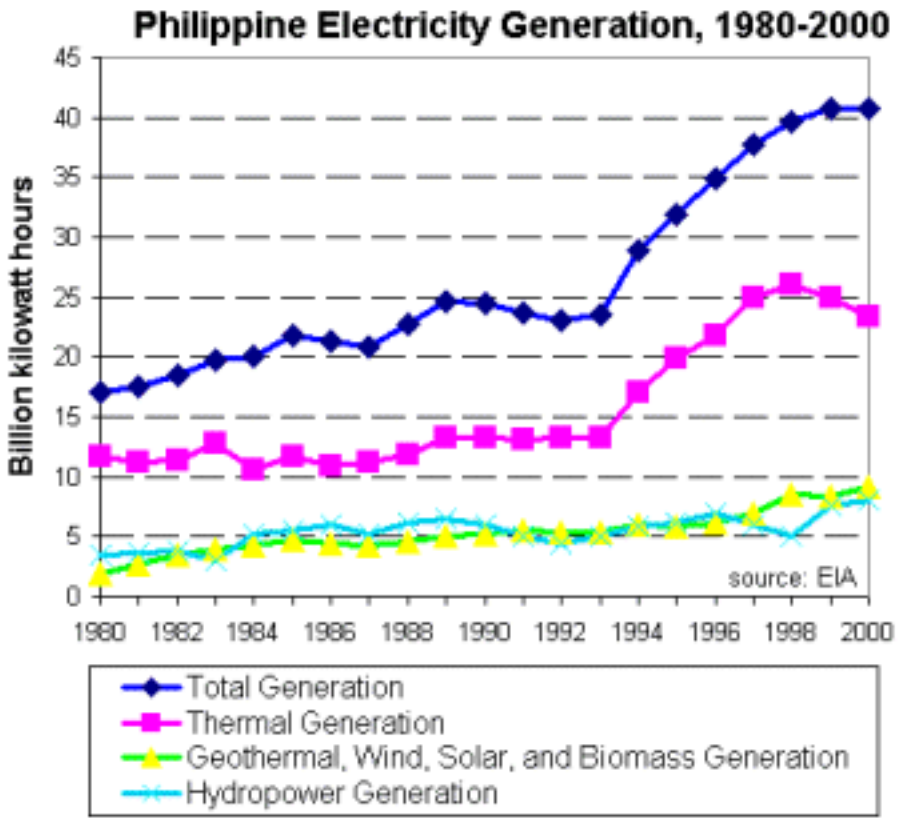
ELECTRICITY

Energy production in the Philippines is concentrated in the electricity sector. Geothermal power accounts for the country's largest share of indigenous energy production, followed by hydropower, coal, oil and gas. The Philippine

government has made shifting from reliance on imported oil a major goal, and is pushing the current boom in natural gas-fired electricity development.

The most significant event in the Philippine energy industry in recent years has been the Power Industry Reform Act of 2001. After 7 years of congressional debate and court cases, the Act came into force on June 26, 2001. The act has three main objectives: 1) to develop indigenous resources; 2) to cut the high cost of power in the Philippines; and 3) to encourage foreign investment. Passage of the Act sets into motion the deregulation of the power industry and the breakup and eventual privatization of state-owned enterprises. Actual sale of state assets and implementation of the program is not likely to take place until late 2002 or 2003.

The legislation requires the state-owned utility National Power Corporation (Napocor) to break-up its vertically integrated assets into smaller sub-sectors such as generation, transmission, distribution and supply in order to prepare for eventual privatization. The result will be a system in which privatized generators would sell directly to private distribution companies. Working with consultants from Hunton and Williams, Napocor has designated two new subsidiary companies designed solely for eventual privatization. These two firms, Transco and Psalmcorp, will entail the state's high voltage transmission lines and infrastructure, and power plants, respectively. The government also will sell off its share of Meralco, a smaller company that serves Manila and the immediate surrounding area by buying power from various Independent Power Producers (IPPs).



Napocor will need to transfer its existing power purchase obligations to private distributors, and also to renegotiate high-priced contracts. The cost savings lie in the fact that private distributors will likely be unwilling to enter into agreements that are above market rates. There are other financial incentives for the government as well. Napocor's huge debt and $9 billion in power purchase agreements are unsustainable, and the government must already contribute $300 million per year to keep Napocor afloat. Finally, the government needs more foreign investment in the sector as demand is projected to outpace supply by around 2005 at current rates of investment.

In order to make the sale of Napocor more attractive to investors, the government has absorbed a significant amount of Napocor's $6.7 billion debt. In addition, the $9 billion in power purchase agreements with IPPs also will be sold off. The transmission system will be transferred to an independent company, Transco, which is scheduled for privatization by mid-2002. Privatization of Transco, however, is contingent upon congressional approval for the rules governing a new wholesale spot market as well as a reduced transmission tariff, or "wheeling charge". According to deregulation laws, no one potential buyer will be allowed to own more than 30% of the Philippines' generating assets.

Electricity demand in the Philippines is expected to grow by around 9% per year through 2009, necessitating as much as 10,000 megawatts (MW) of new installed electric capacity. Current contracts will provide about half of that

amount, with the remainder expected to be filled once the market deregulates. Medium-term increases in power demand are to be satisfied largely by the three gas-fired plants (Ilijan, Santa Rita, and Sucat) that will be linked to the Malampaya gas field, plus the coal-fired 470-MW Quezon Power Project that was inaugurated in June 2000. The Korea Electric Power Corporation (KEPCO) plans to complete the 1,200-MW Ilijan plant in 2002. KEPCO will run the plant under a build-operate-transfer scheme for 20 years, after which ownership will revert to Napocor. Minority stakeholders in the plant are Southern Energy of the United States (20%) plus Mitsubishi (21%) and Kyushu Power (8%) of Japan. First Gas Power completed its 1,020-MW plant at Santa Rita in August 2000, with the plant running on condensate until gas becomes available. First Gas Power's subsidiary FGP Corporation is building a 500-MW power plant nearby the First Gas facility in Santa Rita, in Sucat. Operators are expected to begin by 2006.

Other power facilities planned, under construction, or recently completed include four small hydroelectric plants with a total capacity of 650 MW in the Mindanao region and three small diesel-fired plants in Oriental Mindoro operated by Southern Energy. The CE Casecnan Water and Energy Company (a subsidiary of California Energy International) is constructing a multipurpose irrigation and 150-MW hydroelectric facility in Luzon.

Southern Energy is the Philippines' largest IPP, operating five power plants in the country. Southern's new coal-fired Sual plant began commercial operation in late 1999. The 1,218-MW plant is located about 130 miles north of Manila, and reportedly is the nation's largest and lowest-cost electricity producer. Napocor is the sole purchaser of Sual electricity.

Several power-generating facilities also are under extensive rehabilitation. The 100-MW Binga hydroelectric plant in Itogon, Benguet has been under renovation since 1993 following damage from a 1990 earthquake. Due to political factors, this renovation has so far been unsuccessful, with the dam in worse shape now than in 1993. A larger project is the $470 million contract with Argentine firm IMPSA (*Industrias Metalurgicas Pescarmona Sociedad*

Anonima) to rehabilitate and operate the 750-MW Caliray-Botocan-Kalayaan (CBK) power complex in Laguna, south of Manila. The CBK complex is the grid regulator in Luzon, and as such is able to transmit power to other plants on the grid in the event of breakdowns. IMPSA, in conjunction with new partner Edison Mission Energy of the United State, was able to get a performance undertaking guarantee despite Napocor's and some government officials' objections, facilitating long-delayed financing of the project.

In March 2000, Texas-based El Paso Energy International and Hawaiian Electric Industries formed a 50-50 joint venture to own and operate five power plants now owned by East Asia Power Resources Corporation, a public Philippine company. The total generation capacity of the venture's holdings will be 390 MW. The oil-fired plants are located in Manila and Cebu.

Volatility in electric power prices has angered many Filipinos, who blame the Power Industry Reform Act of 2001. The Act calls for an Energy Regulatory Board, which reviews and approves applications by the National Power Corporation for price increases. Controversy over pricing still exists, however, as the Association of Philippine Electric Cooperatives demonstrated in May of 2001 with an organized blackout to protest a 30 centavo rate increase instigated by Napocor.

The Philippines, due to its geography, has problems linking all of its islands together into one grid and ensuring availability of electric power to the remaining 9,708 villages without electricity. The government has set a target date of 2004 for electrification of all these villages through the 14-billion peso "O-Ilaw" program, and also is taking steps to link together the country's three major power grids (Luzon, Visayas, and Mindanao). As of March, 2002, the government claims the project is 85.6% complete. Where it is not economical to link small islands' grids into the national grid, separate local systems are being established around small generating plants.

Renewables

The Philippines is the world's second largest producer of geothermal power,

with an available capacity of 1,931 MW, according to the Philippine government. The government would like to bring on another 990 MW, bringing capacity to 2,921MW, and exceeding the U.S. capacity of 2,775 MW. Geothermal power currently makes up around 16% of the Philippines' installed generation capacity, most of which has been developed by the PNOC - Energy Development Corporation (PNOC-EDC). Privatization of PNOC-EDC is expected in the near future, with several firms already expressing interest. PNOC-EDC bought Napocor's geothermal assets in March 2001. Kyushu Electric company is in a joint venture with PNOC-EDC to develop a 40-MW geothermal plant in Sorsogon, Albay province, and Marubeni of Japan has expressed its intent to build the 100-MW Cabalian geothermal plant in Leyte. California Energy's Philippine unit is working with PNOC to develop three new geothermal power plants in Leyte, producing a total of 540-MW of electricity. Plans are underway to develop nine new facilities in Luzon, ranging from 20 MW to120 MW that will eventually bring a total of 440 MW of geothermal energy to the grid. By 2004, the new 40-MW Mambucal and 40-MW Rangas power stations in Dauan, Negros Oriental are expected to come online.

Besides geothermal, the Philippines also is exploring the use of other renewables for electricity generation, particularly in the country's unelectrified villages. In December 2000, WorldWater Corp. signed an agreement with Cebu Electric Cooperative to provide 1,200 homes with solar electrification. In March 2001, the Philippine and Spanish governments, in conjunction with BP, agreed to a $48 million contract to bring solar power to 150 villages. BP and the government of Australia also have partnered with the Philippines to supply solar power to rural villages, bringing 1,145 solar-powered systems to 52 new municipalities. New solar-powered facilities were also inaugurated for villages on Samal Island on December 7, 2001.

The Philippines appears to have a strong potential for wind farming. The United States Department of Energy wind mapping survey estimates that wind resources in the Philippines have a power generation potential of as much as 70,000 MW, seven times the country's current power demand.

Garrad Hassan Ltd. of the United Kingdom has expressed interest in a $220 million wind power pilot project. Another wind power project is the 40-MW, PNOC-EDC Northern Luzon project in Ilocos Norte, scheduled to begin operations in 2002. PNOC and the Japan Bank of International Cooperation also plan to build a $64.7 million, 40-MW wind farm in Burgos. The Burgos facility will be the country's first commercial wind farm, and may possibly be connected by a spur line to the Luzon Island power grid. This project is the first in a series of three to add 120 MW of wind power to the NAPCOR grid. A biomass waste-to-energy plant is planned for Negros Occidental that would use 450 tons of municipal waste and bagasse per hour.

Nuclear

In March 2000, the government announced that it would build a 600-MW nuclear power plant similar to the Bataan plant by 2020. However, the Bataan plant was declared inoperable due to its location on an earthquake fault, and the government continues to pay $250,000 per day to service the debt on the inoperable plant. The Triga Research Reactor, which dates from 1963, is to be replaced with a new 20-MW research reactor, according to the Philippine government.

Sources for this report include: AFX News Limited; Asia Pulse; Asiaweek; Bernama; Business Wire; BusinessWorld; Coal Week International; CIA World Factbook; Dow Jones News Wire service; DRI/WEFA Asia Economic Outlook; Economist Intelligence Unit Ltd.; Financial Times; Mondaq Ltd; Oil and Gas Journal; International Market Insight Reports; Platts International Coal Report; Project Finance; U.S. Energy Information Administration; The Mining Journal Ltd. .

COUNTRY OVERVIEW

President: Gloria Macapagal-Arroyo (sworn in January 20, 2001 after resignation of Joseph Estrada; next election May 2004)
Independence: July 4, 1946 (from United States)
Population (2001E): 82.8 million
Location/Size: Southeast Asia/115,830 sq. mi. (slightly larger than Arizona)

Major Cities: Manila (capital), Quezon City, Cebu, Davao
Languages: Pilipino (official; based on Tagalog), English (official)
Ethnic Groups: Christian Malay (91.5%), Muslim Malay (4%), Chinese (1.5%), other (3%)
Religions: Roman Catholic (83%), Protestant (9%), Muslim (5%), Buddhist and other (3%)
Defense (8/98): Army (74,500), Navy (25,900), Air Force (17,400), Reserves (131,000)

ECONOMIC OVERVIEW

Finance Secretary: Jose Camacho
Currency: Philippine peso
Market Exchange Rate (5/02/02): $1 = 50.25 pesos
Gross Domestic Product (GDP, 2001): $71.4 billion
Real GDP Growth Rate (2000): 4.0% **(2001):** 3.4% **(2002F)** 3.8%
Inflation Rate (consumer prices, 2000): 4.3% **(2001):** 6.1% **(2002F)** 5%
Current Account Balance (2001E): $4,506 million
Major Trading Partners: United States, Japan, EU, Singapore, Hong Kong
Merchandise Exports (2001E): $32,152 million
Merchandise Imports (2001E): $29,550 million
Major Export Products: Electronic equipment, machinery, garments, coconut oil
Major Import Products: Machinery and equipment, fuel products, textile yarns, chemicals
Total External Debt (2002E): $50.5 billion

ENERGY OVERVIEW

Secretary of Energy: Vicente Perez
Proven Oil Reserves (1/1/02E): 178 million barrels (Oil and Gas Report)
Oil Production (2001E): 8,460 bbl/d
Oil Consumption (2001E): 356,000 bbl/d
Net Oil Imports (2001E): 347,540 bbl/d
Crude Oil Refining Capacity (1/01/02E): 419,500 bbl/d
Natural Gas Reserves (1/1/02E): 3.693 trillion cubic feet

Natural Gas Production and Consumption: (2000E) Negligible
Recoverable Coal Reserves (2000E): 366 million short tons
Coal Production (2000E): 1.49 million short tons
Coal Consumption (2000E): 9.5 million short tons
Electric Generation Capacity (1999E): 12 million kilowatts
Electricity Generation (2000E): 40.7 billion kilowatthours (bkwh) (57.5% thermal, 19.9% hydro, and 22.6% "renewables"*)
Electricity Consumption (2000E): 37.8 bkwh

ENVIRONMENTAL OVERVIEW

Secretary of Environment & Natural Resources: Heherson Alvarez
Total Energy Consumption (2000E): 1.23 quadrillion Btu* (0.3% of world total energy consumption)
Energy-Related Carbon Emissions (2000E): 19.55 million metric tons of carbon (0.3% of world total energy-related carbon emissions)
Per Capita Energy Consumption (2000E): 15.8 million Btu (vs. U.S. value of 351.0 million Btu)
Per Capita Carbon Emissions (2000E): 0.3 metric tons of carbon (vs. U.S. value of 5.6 metric tons of carbon)
Energy Intensity (2000E): 13,888 Btu/$1995 (vs U.S. value of 10,918Btu/$1995)**
Carbon Intensity (2000E): 0.22 metric tons of carbon/thousand $1995 (vs U.S. value of 0.17 metric tons/thousand $1995)**
Sectoral Share of Energy Consumption (1998E): Industrial (49.8%), Residential (24.9%), Transportation (16.7%), Commercial (8.6%)
Sectoral Share of Carbon Emissions (1998E): Industrial (55.0%), Transportation (22.2%), Residential (16.1%), Commercial (6.7%)
Fuel Share of Energy Consumption (2000E): Oil (60.16%), Coal (17%), Natural Gas (0.0%)
Fuel Share of Carbon Emissions (2000E): Oil (73.2%), Coal (26.75%), Natural Gas (0.0%)
Renewable Energy Consumption (2000E): 0.27 quadrillion Btu*
Number of People per Motor Vehicle (1998): 32.3 (vs. U.S. value of 1.3)

Status in Climate Change Negotiations: Non-Annex I country under the United Nations Framework Convention on Climate Change (ratified August 2nd, 1994). Signatory to the Kyoto Protocol (signed April 15th, 1998).
Major Environmental Issues: Uncontrolled deforestation in watershed areas; soil erosion; air and water pollution in Manila; increasing pollution of coastal mangrove swamps which are important fish breeding grounds.
Major International Environmental Agreements: A party to Conventions on Biodiversity, Climate Change, Endangered Species, Hazardous Wastes, Law of the Sea, Marine Dumping, Nuclear Test Ban, Ozone Layer Protection, Tropical Timber 83, Tropical Timber 94, Wetlands and Whaling. Has signed, but not ratified, Desertification.

* The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar and wind electric power. The renewable energy consumption statistic is based on EIA data and includes geothermal, solar, wind, wood and waste electric power consumption.. Sectoral shares of energy consumption and carbon emissions are also based on IEA data.
**GDP based on EIA International Energy Annual 2000

OIL AND GAS INDUSTRIES

Organization: The Philippine National Oil Company (PNOC) is the country's state-owned energy company responsible for oil and development of local energy resources. Petron, privatized in 1994, is considered to be the country's largest oil refining company, with Shell and Caltex also significant. National Power Corporation (NPC) is the state-owned electric company.
Major Foreign Energy Company Involvement: Caltex, Royal-Dutch Shell, Petroleum Authority of Thailand, TotalFinaElf
Major Natural Gas Fields: Malampaya-Camago
Major Oil Refineries (capacity - bbl/d): Petron -- Limay, Bataan (180,000 bbl/d); Pilipinas Shell -- Tabangao (153,000) bbl/d); Caltex -- Batangas (86,500 bbl/d) For more information from EIA on the Philippines, please see: EIA - Country Information on the Philippines

Philippines - U.S. Energy Data Exchange Home Page

Links

Links to other U.S. and state government sites:

CIA World Factbook - Philippines
U.S. Department of Energy's Office of Fossil Energy's International section - Philippines
U.S. State Department's Consular Information Sheet - Philippines
U.S. State Department's Country Commercial Guide - Philippines
U.S. State Department Background Notes - Philippines
Library of Congress Country Study - Philippines
State of Hawaii Country Profiles
U.S. Embassy in the Philippines

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Philippine National Oil Company (PNOC)
Petron
Pilipinas Shell
Caltex (Philippines)
Pancontinental Oil & Gas
Philippines' Department of Energy
Philippines' Energy Plan Update 2000-2009
Philippines' Department of Environment and Natural Resources
Philippines' Department of Trade and Industry
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World Bank on the Philippines

Philippine Mission to the United Nations
Lonely Planet Guide: Philippines

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